

70031 Access DB# _____ SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: P. Spivack Examiner #: 70400 Date: 7/1/02
 Art Unit: 1614 Phone Number 30 8 9703 Serial Number: 09/643558
 Mail Box and Bldg/Room Location: 2D05 Results Format Preferred (circle): PAPER DISK E-MAIL

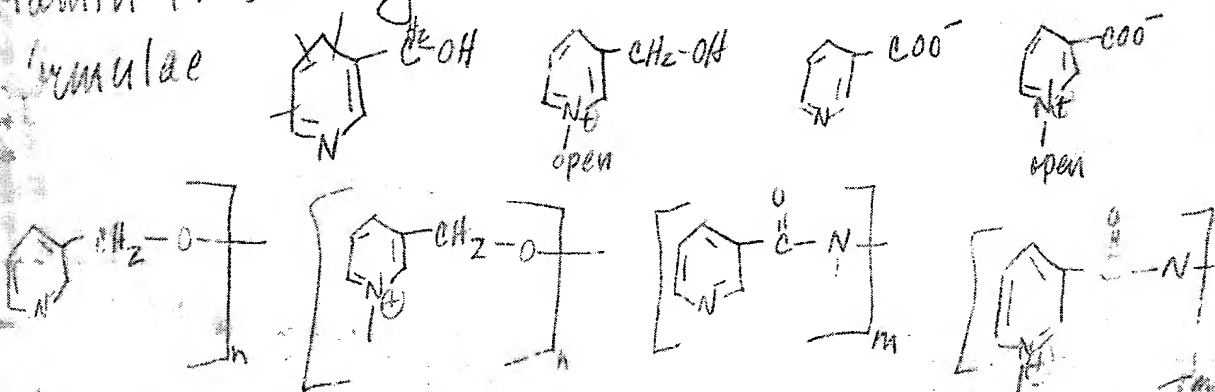
If more than one search is submitted, please prioritize searches in order of need.

 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Vitamin PP compds.
 Inventors (please provide full names): Elfi Biedermann
Max Hasmann
 Earliest Priority Filing Date: 4/22/98

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search both methods of reducing side effects (adverse reactions to) cancerostatic or immunosuppressive agents comprising administering: 1) a compound having vitamin PP activity as nicotinamide, or 2) compounds



AND: compositions comprising (1) and (2)

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>POINT OF CONTACT:</u>	NA Sequence (#) _____	STN <u>✓</u>
Searcher Phone #: <u>PAUL SCHULWITZ</u>	AA Sequence (#) _____	Dialog _____
Searcher Location: <u>TECHNICAL INFO. SPECIALIST</u>	Structure (#) <u>1</u>	Questel/Orbit _____
Date Searcher Picked Up: <u>7/1</u>	Bibliographic _____	Dr. Link _____
Date Completed: <u>7/3</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>90</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: _____	Other _____	Other (specify) _____

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Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: JP 2000512652 W, WO 9748397 A1, DE 19624668 A1, AU 9732624 A, ZA 9705443 A, EP 912176 A1

L5: Entry 1 of 1

File: DWPI

Sep 26, 2000

DERWENT-ACC-NO: 1998-100698

DERWENT-WEEK: 200051

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*different
inventive
stage*

TITLE: Use of pyridyl alkane, pyridyl alkene and/or pyridyl alkyne acid amide - as cytostatic, immunomodulatory or immuno-suppressive agents

INVENTOR: BIEDERMANN, E; HASMANN, M ; LOSER, R ; RATTEL, B ; REITER, F ; SCHEIN, B ; SEIBEL, K ; VOGT, K ; LOESER, R

PATENT-ASSIGNEE:

ASSIGNEE

CODE

KLINGE PHARMA GMBH & CO KG

CHEH

KLINGE PHARMA GMBH

CHEH

PRIORITY-DATA: 1996DE-1024668 (June 20, 1996)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2000512652 W	September 26, 2000		286	A61K031/44
WO 9748397 A1	December 24, 1997	E	268	A61K031/44
DE 19624668 A1	February 19, 1998		000	A61K031/44
<u>AU 9732624 A</u>	January 7, 1998		000	A61K031/44
ZA 9705443 A	April 29, 1998		256	A61K000/00
EP 912176 A1	May 6, 1999	E	000	A61K031/44

DESIGNATED-STATES: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP2000512652W	June 20, 1997	1997WO-EP03244	
JP2000512652W	June 20, 1997	1998JP-0502317	
JP2000512652W		WO 9748397	Based on
WO 9748397A1	June 20, 1997	1997WO-EP03244	
DE 19624668A1	June 20, 1996	1996DE-1024668	
AU 9732624A	June 20, 1997	1997AU-0032624	
AU 9732624A		WO 9748397	Based on
ZA 9705443A	June 19, 1997	1997ZA-0005443	
EP 912176A1	June 20, 1997	1997EP-0928260	
EP 912176A1	June 20, 1997	1997WO-EP03244	
EP 912176A1		WO 9748397	Based on

INT-CL (IPC): A61 K 0/00; A61 K 31/00; A61 K 31/44; A61 K 31/445; A61 K 31/47; A61 K 31/505; A61 K 31/535; A61 K 31/55; A61 K 31/675

ABSTRACTED-PUB-NO: WO 9748397A

BASIC-ABSTRACT:

Use of one or more pyridine derivatives of formula (I), and its stereoisomers, mixtures and acid addition salts, for preparation of medicaments for cytostatic, immunomodulatory and/or immunosuppressive treatment, is new. R1 = H, halo, CN, CF3, OH, BzO, H2NCO, COOH, Ph, PhO, PhS, PyO, PyS, T, hydroxyalkyl, TO, TO-CO-O, TS, Cy, CyO, CyS, TOOC or TNHCO; R2 = H, halo, CN, OH, CF3, BzO, T, TO or RO; R3 = H, halo, T, CF3 or hydroxyalkyl; R4 = H, T, Cy or TO; k = 0 or 1; A = alkylene, 1,2-cyclopropylene, alkenylene, alkadienylene, 1,3,5-hexatrienylene or ethynylene; D = alkylene, alkenylene (in which the double bond can also be to ring E) or alkynylene; E = a group of formula (i) or (ii), each of which may include a double bond; n, p = 0, 1, 2 or 3, provided that n + p is not more than 4; q = 2 or 3; R11 = H, T, OH, HOCH2, COOH or TOCO; R12 = H, T, or an oxo group adjacent to the N atom; G = H, G1, G2, G3, G4 or G5; G1 = (CH2)r-(CR14R15)s-R13; G2 = C(O)-(CH2)r-(CR14R15)s-R13 or C(O)-(CH2)r-NR13R15; G3 = SO2-(CH2)rR13; G4 = P(=O)Ar1Ar2; G5 = COR16; r = 0, 1, 2 or 3; s = 0 or 1; R13, R14 = H, T, cycloalkyl, a saturated, 5-7 membered heterocycle, Bz, Ph or monocyclic aromatic 5-6 membered heterocycle; R15 = H, OH, Me, Bz, Ph, monocyclic aromatic 5-6 membered heterocycle; Ar1, Ar2 = Ph, Py or naphthyl; R16 = CF3, TO or BzO; T = alkyl; Cy = cycloalkyl; Ph = phenyl; Bz = benzyl; Py = pyridyl; R = alkanoyl.

USE - (I) may be used, optionally in combination with other active agents, in treatment of, e.g. tumours, psoriasis, autoimmune diseases or transplant rejection. Administration of (I) is, e.g. oral, parenteral, topical, transdermal or by inhalation.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: PYRIDYL ALKANE PYRIDYL ALKENE PYRIDYL ALKYNE ACID AMIDE CYTOSTATIC IMMUNOMODULATORY IMMUNO SUPPRESS AGENT

DERWENT-CLASS: B02 B03

CPI-CODES: B07-D04; B14-G02C; B14-G02D; B14-H01; B14-N17C;

CHEMICAL-CODES:

Chemical Indexing M2 *01*

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Ring Index

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Markush Compounds

199809-28601-U

Chemical Indexing M2 *02*

Fragmentation Code

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M904 P433 P434 P632 P633 V411

Ring Index

03697 12761

Markush Compounds

199809-28602-U

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1998-033197

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC
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☐ 1. Document ID: JP 2000512651 W, WO 9748695 A1, DE 19624704 A1, AU 9733420 A, ZA 9705439 A, EP 934309 A1

L3: Entry 1 of 1

File: DWPI

Sep 26, 2000

DERWENT-ACC-NO: 1998-100704

DERWENT-WEEK: 200051

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TITLE: New pyridyl alkane acid amide compounds - useful as cytostatic and immunosuppressive agents

INVENTOR: BIEDERMANN, E; HASMANN, M ; LOSER, R ; RATTEL, B ; REITER, F ; SCHEIN, B ; SEIBEL, K ; VOGT, K ; LOESER, R

PATENT-ASSIGNEE:

ASSIGNEE

CODE

KLINGE PHARMA GMBH & CO KG

CHEH

PRIORITY-DATA: 1996DE-1024704 (June 20, 1996)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2000512651 W	September 26, 2000		248	C07D401/12
WO 9748695 A1	December 24, 1997	E	219	C07D401/12
DE 19624704 A1	January 8, 1998		101	C07D401/12
<u>AU 9733420 A</u>	January 7, 1998		000	C07D401/12
ZA 9705439 A	April 29, 1998		214	C07D000/00
EP 934309 A1	August 11, 1999	E	000	C07D401/12

DESIGNATED-STATES: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP2000512651W	June 20, 1997	1997WO-EP03243	
JP2000512651W	June 20, 1997	1998JP-0502316	
JP2000512651W		WO 9748695	Based on
WO 9748695A1	June 20, 1997	1997WO-EP03243	
DE 19624704A1	June 20, 1996	1996DE-1024704	
AU 9733420A	June 20, 1997	1997AU-0033420	
AU 9733420A		WO 9748695	Based on
ZA 9705439A	June 19, 1997	1997ZA-0005439	
EP 934309A1	June 20, 1997	1997EP-0929240	
EP 934309A1	June 20, 1997	1997WO-EP03243	
EP 934309A1		WO 9748695	Based on

INT-CL (IPC): A61 K 31/436; A61 K 31/437; A61 K 31/44; A61 K 31/4427; A61 K 31/4439; A61 K 31/445; A61 K 31/4545; A61 K 31/4709; A61 K 31/502; A61 K 31/519; A61 K 31/5377; A61 K 31/55; A61 K 31/553; A61 P 35/00; A61 P 37/00; C07 D 0/00; C07 D 213/56; C07 D 401/12; C07 D 401/14; C07 D 405/12; C07 D 405/14; C07 D 409/14; C07 D 413/12; C07 D 413/14; C07 D 417/14; C07 D 471/08; C07 D 491/052; C07 D 495/04; C07 D 513/04; C07 F 9/36

ABSTRACTED-PUB-NO: WO 9748695A
BASIC-ABSTRACT:

Pyridine derivatives of formula (I), and their stereoisomers, mixtures and acid addition salts are new: R1 = H, halo, CN, CF3, OH, BzO, H2NCO, COOH, Ph, PhO, PhS, PyO, PyS, T, U, V, hydroxyalkyl, TO, UO, VO, RO, TOCOO, TS, US, VS, Cy, CyO, CyS, TOOC, TNHCO, T2NCO or NR5R6; R2 = H, halo, CN, OH, CF3, BzO, T, TO or RO; or R1 + R2, when they are adjacent, may form a bridge of formula (CH2)4, (CH=CH)2 or CH2OCR7R8O; R5, R6 = H, T, U or V; R7, R8 = H or T; R3 = H, halo, T, CF3 or hydroxyalkyl; R4 = H, OH, BzO T, U, V, Cy or TO; k = 0 or 1; A = alkylene (optionally substituted), 1,2-cyclopropylene; or alkylene; D = alkylene (optionally substituted), alkenylene (containing at least 2 C atoms and optionally substituted), in which the double bond can also be to ring E; alkynylene (containing at least 3 C atoms and optionally substituted), or alkylene, alkenylene (containing at least 2 C atoms) or alkynylene (containing at least 2 C atoms), in which 1-3 methylene units are each isosterically replaced by O, S, NR10, CO, SO or SO2; R10 = H, T, U, V, acyl, or TSO2; E = a group of formula (i) or (ii), each of which may include a double bond: n, p = 0-3, provided that n + p at most 4; q = 2 or 3; R11 = H, T, OH, HOCH2, COOH or TOCO; R12 = H, T, or an oxo group adjacent the N atom; or R11 + R12 may form a 1-5C alkylene bridge; G = e.g. H, (CH2)r(CR14R15)sR13 (G1), SO2(CH2)rR13 (G3), P(=O)Ar1Ar2 (G4), or COR16 (G5); r = 0-3; s = 0 or 1; R13, R14 = e.g. H; T; U (containing at least 3 C atoms); V (containing at least 3 C atoms); cycloalkyl; a saturated, 5-7 membered heterocycle, Bz; Ph; a monocyclic aromatic 5-6 membered heterocycle, an anellated bi- or tricyclic aromatic or partially hydrated carbocyclic or heterocyclic ring system etc.; R15 = e.g. H, OH, Me, Bz, Ph; a monocyclic aromatic 5-6 membered heterocycle, an anellated bi- or tricyclic aromatic or partially hydrated carbocyclic ring system, or NR13R15 = a nitrogen heterocycle linked via the N atom; Ar1, Ar2 = Ph, Py or naphthyl; R16 = CF3, TO, UO or BzO; T = alkyl; U = alkenyl; V = alkynyl; Cy = cycloalkyl; Bz = benzyl; Py = pyridyl; R = alkanoyl; any aryl residues and/or aromatic ring systems in R1, R2, R4, R13-R16, NR13R15, Ar1 and Ar2 are optionally substituted.

USE - (I) are useful as ~~cancerostatic~~ cytostatic agents or immunosuppressive agents. They may be used, optionally in combination with other active agents, in treatment of, e.g., tumours, psoriasis, ~~autoimmune~~ diseases or transplant rejection.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: NEW PYRIDYL ALKANE ACID AMIDE COMPOUND USEFUL CYTOSTATIC

IMMUNOSUPPRESSIVE AGENT

DERWENT-CLASS: B02 B03

CPI-CODES: B07-D04; B07-D05; B14-G02; B14-G02C; B14-G02D; B14-H01;

CHEMICAL-CODES:

Chemical Indexing M2 *01*

Fragmentation Code

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G010 G011 G019 G020 G021 G031 G100 G221 G310 H121
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M710 M800 M903 M904 P433 P633

Ring Index

03672

Markush Compounds

199809-29002-N

Chemical Indexing M2 *02*

Fragmentation Code

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Ring Index

03672

Markush Compounds

199809-29003-N

Chemical Indexing M2 *03*

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03672
Markush Compounds
199809-29004-N

Chemical Indexing M2 *04*

Fragmentation Code

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Ring Index
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Markush Compounds
199809-29005-N

Chemical Indexing M2 *05*

Fragmentation Code

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Ring Index

03672

Markush Compounds
199809-29006-N

Chemical Indexing M2 *06*

Fragmentation Code

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Ring Index

03672

Markush Compounds
199809-29001-N

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1998-033203

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC
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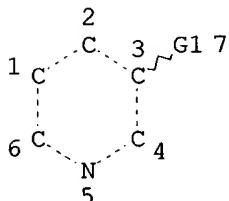
Terms	Documents
AU-9733420-\$.DID.	1

Display Format:

[Previous Page](#) [Next Page](#)

=> d que

L3 1 SEA FILE=REGISTRY ABB=ON PLU=ON "VITAMIN PP"/CN
 L4 1 SEA FILE=REGISTRY ABB=ON PLU=ON NICOTINAMIDE/CN
 L5 1445316 SEA FILE=REGISTRY ABB=ON PLU=ON NC5/ES
 L6 1248173 SEA FILE=REGISTRY ABB=ON PLU=ON L5 AND O/ELS
 L7 STR



CH2-O
 @8 9

O=C~O
 10 @11 12

O=C~N
 13 @14 15

VAR G1=8/11/14

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

L9 79421 SEA FILE=REGISTRY SUB=L6 SSS FUL L7
 L10 61402 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 OR L4 OR L9
 L11 12754 SEA FILE=HCAPLUS ABB=ON PLU=ON IMMUNOSUPPRESSANTS/CT
 L12 11027 SEA FILE=HCAPLUS ABB=ON PLU=ON IMMUNOSUPPRESSION/CT
 L16 176 SEA FILE=HCAPLUS ABB=ON PLU=ON L10 AND (L11 OR L12)
 L19 46 SEA FILE=HCAPLUS ABB=ON PLU=ON (L3 OR L4 OR L9) (L) (IMMUNOSUPP
 RES? OR CANCEROSTAT? OR (SIDE EFFECT OR ADVERSE REACTION) (3A) (R
 EDUC? OR SUPPRES?)) and *

L20 38 SEA FILE=HCAPLUS ABB=ON PLU=ON L19 AND L16
 L25 5593 SEA FILE=HCAPLUS ABB=ON PLU=ON (L3 OR L4) AND L9
 L26 17 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND (L11 OR L12)
 L28 54 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 OR L26

=> d bib abs hitstr 1-54

L28 ANSWER 1 OF 54 HCAPLUS COPYRIGHT 20
 AN 2002:240756 HCAPLUS
 DN 136:279345
 TI Preparation of hydroxyarylpyridines w
 inhibiting activity
 IN Lowinger, Timothy B.; Murata, Toshiki
 Sachiko; Yoshino, Takashi; Sato, Hiro
 Shimada, Mitsuyuki; Shintani, Takuya;
 B.; Fuchikami, Kinji; Komura, Hiroshi
 PA Bayer Aktiengesellschaft, Germany
 SO PCT Int. Appl., 280 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 3

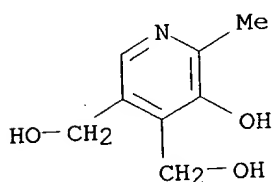
could I see L19
 results minus 2002,
 2001, 2000, 1999
 refs.?
 Thanks
 7/5/02

Claritin
 10mg TABLETS (loratadine)

L9 ANSWER 23 OF HCAPLUS COPYRIGHT 2002 ACS
AN 1976:84168 HCAPLUS
DN 84:84168
TI Relation between providing an organism with pyridoxine and the immunological effect of 6-mercaptopurine
AU Artemov, V. A.
CS Kursk. Medinst., Kursk, USSR
SO Vopr. Eksp. Klin. Immunol. (1974), 61-3. Editor(s): Krut'ko, N. F.
Publisher: Voronezh. Gos. Med. Inst., Voronezh, USSR.
CODEN: 32BEA6
DT Conference
LA Russian
AB 6-Mercaptopurine (I) [50-44-2] (40 mg/kg/day) given i.p. to rats for 4 days beginning on the day of immunization with sheep erythrocytes had an

immunodepressive effect. However, when rats were given optimal doses of pyridoxine [65-23-6] (30 .mu.g/day, s.c.), the immunodepressive effect of I was no longer obsd.

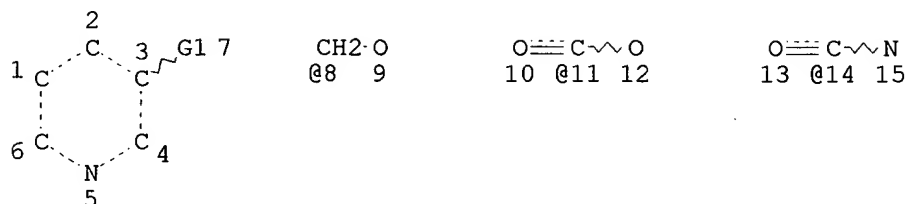
IT 65-23-6
RL: BIOL (Biological study)
(**immunosuppression** by mercaptopurine in relation to)
RN 65-23-6 HCAPLUS
CN 3,4-Pyridinedimethanol, 5-hydroxy-6-methyl- (9CI) (CA INDEX NAME)



file

=> d que

L1 STR



VAR G1=8/11/14

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 1

NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

L3 78279 SEA FILE=REGISTRY SSS FUL L1
 L4 1 SEA FILE=REGISTRY ABB=ON PLU=ON VITAMIN PP/CN
 L5 1 SEA FILE=REGISTRY ABB=ON PLU=ON NICOTINAMIDE/CN
 L6 43 SEA FILE=HCAPLUS ABB=ON PLU=ON (L3 OR L4 OR L5) (L) (IMMUNOSUPP
 RES? OR CANCEROSTAT?)
 L7 2 SEA FILE=HCAPLUS ABB=ON PLU=ON (L3 OR L4 OR L5) (L) (SIDE
 EFFECT OR ADVERSE REACT?) (3A) (REDUC? OR SUPPRES?)
 L9 29 SEA FILE=HCAPLUS ABB=ON PLU=ON (L6 OR L7) NOT PY>1998

=> d bib ab hitstr 1-29

L9 ANSWER 1 OF 29 HCAPLUS COPYRIGHT 2002 ACS
 AN 1998:124021 HCAPLUS
 DN 128:158947
 TI Zinc-containing composition
 IN Hasegawa, Kazuo; Ishii, Takako
 PA Taisho Pharmaceutical Co., Ltd., Japan; Hasegawa, Kazuo; Ishii, Takako
 SO PCT Int. Appl., 14 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9806410	A1	19980219	WO 1997-JP2770	19970807
	W: AU, CA, CN, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9737842	A1	19980306	AU 1997-37842	19970807
	JP 10109940	A2	19980428	JP 1997-213773	19970808
PRAI	JP 1996-212604		19960812		
	WO 1997-JP2770		19970807		
AB	The invention relates to a zinc-contg. compn. comprising vitamin B6 and a zinciferous component, characterized in that the molar ratio of vitamin B6 to zinc contained in the component lies between 0.55:1 and 2.2:1. This				

compn. is reduced in the side effects due to excessive intake of zinc and is therefore excellent in safety.

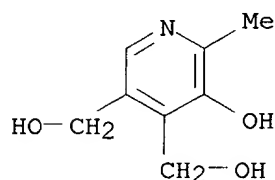
IT 58-56-0, Pyridoxine hydrochloride

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(zinc-contg. compns. comprising vitamin B6 to **reduce side effects** due to excessive intake of zinc)

RN 58-56-0 HCAPLUS

CN 3,4-Pyridinedimethanol, 5-hydroxy-6-methyl-, hydrochloride (9CI) (CA INDEX NAME)



● HCl

L9 ANSWER 2 OF 29 HCAPLUS COPYRIGHT 2002 ACS

AN 1997:713985 HCAPLUS

DN 128:3225

TI Pyridoxine deficiency: new approaches in immunosuppression and chemotherapy

AU Trakatellis, Antonios; Dimitriadou, Afrodite; Trakatelli, Myrto

CS Department of Biological Chemistry, Medical School, Aristoteles University of Thessaloniki, Greece

SO Postgraduate Medical Journal (1997), 73(864), 617-622

CODEN: PGMJAO; ISSN: 0032-5473

PB BMJ Publishing Group

DT Journal; General Review

LA English

AB A review with 25 refs. Pyridoxine deficiency leads to impairment of immune responses. It appears that the basic derangement is the decreased rate of prodn. of one-carbon units necessary for the synthesis of nucleic acids. The key factor is a pyridoxine enzyme, serine hydroxymethyltransferase. This enzyme is very low in resting lymphocytes but increases significantly under the influence of antigenic or mitogenic stimuli, thus supplying the increased demand for nucleic acid synthesis during an immune response. Serine hydroxymethyl-transferase activity is depressed by deoxypyridoxine, a potent antagonist of pyridoxal phosphate, and also by known immunosuppressive or antiproliferative agents. The combination of these agents is additive. Our results lead us to suggest the following medical applications: (a) combination of deoxypyridoxine with immunosuppressive or chemotherapeutic drugs may be effective in cases of immunosuppressive therapy or organ transplantation, (b) the development of special agents directed against the serine hydroxymethyltransferase apoprotein may prove to be a valuable medical tool, since this enzyme presents an excellent target for chemotherapy, (c) lymphocytes of individual patients could be used to design tailor-made specific

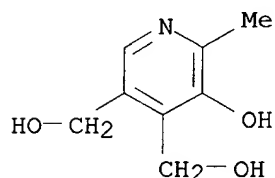
immunosuppressive or chemotherapeutic treatment, and (d) the serine hydroxymethyltransferase activity of lymphocyte culture presents an excellent indicator for the evaluation of potency of immunosuppressive, chemotherapeutic or genotoxic compds. in a simple and rapid test.

IT 65-23-6

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (deficiency; pyridoxine deficiency in new approaches to **immunosuppression** and chemotherapy)

RN 65-23-6 HCAPLUS

CN 3,4-Pyridinedimethanol, 5-hydroxy-6-methyl- (9CI) (CA INDEX NAME)



RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (pyridoxine deficiency in new approaches to **immunosuppression** and chemotherapy)

L9 ANSWER 3 OF 29 HCAPLUS COPYRIGHT 2002 ACS

AN 1997:278841 HCAPLUS

DN 126:277343

TI Preparation of mycophenolic acid derivatives as immunosuppressants

IN Iino, Yukio; Fujita, Koichi; Tsuji, Hisashi; Shiozaki, Makoto; Ishizaki, Sonoko

PA Ajinomoto Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09067358	A2	19970311	JP 1995-226579	19950904

OS MARPAT 126:277343

AB Title compds. I [R1 = H, alkyl; R2, R3 = H, Me, etc.; R4 = (un)substituted alkyl, (un)substituted alkenyl, (un)substituted alkynyl, (un)substituted Ph, (un)substituted heterocyclyl, alkoxy, (un)substituted phenoxy, etc.] are prepd. and their absorption and toxicity were studied. Thus, stirring a mixt. of Et mycophenolate and 4-methoxybenzyl chloride in DMF contg. K2CO3 at room temp. for 40 h gave 90% I [R1 = Et, OR2R3R4 = O-CH2-C6H4-OMe-p]. I [R1 = H, OR2R3R4 = O-CH2-C6H4-OMe-o], also prepd., showed absorption comparable to that of mycophenolic acid; its toxicity to the small intestine as indicated by the activity of alk. phosphatase was comparable to that of mofetil mycophenolate.

IT 188711-57-1P 188711-87-7P

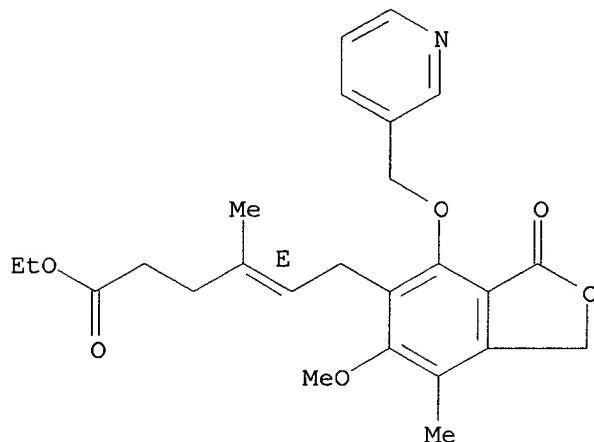
RL: ADV (Adverse effect, including toxicity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of mycophenolic acid derivs. as **immunosuppressants**)

RN 188711-57-1 HCAPLUS

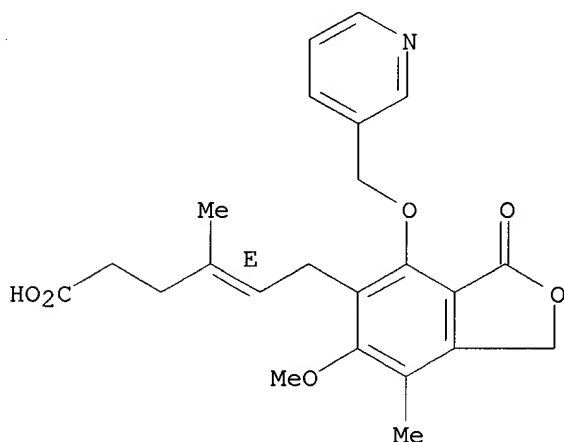
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-(3-pyridinylmethoxy)-5-isobenzofuranyl]-4-methyl-, ethyl ester, (E)- (9CI)
(CA INDEX NAME)

Double bond geometry as shown.



RN 188711-87-7 HCAPLUS
CN 4-Hexenoic acid, 6-[1,3-dihydro-6-methoxy-7-methyl-3-oxo-4-(3-pyridinylmethoxy)-5-isobenzofuranyl]-4-methyl-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 4 OF 29 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:607984 HCAPLUS
DN 123:83100
TI Carbamates of rapamycin
IN Kao, Wenling; Skotnicki, Jerauld S.; Abou-Gharbia, Magid A.; Palmer, Yvette L.
PA American Home Products Corporation, USA

SO U.S., 25 pp. Cont.-in-part of U.S. Ser. No. 160,984, abandoned.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 7

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5411967	A	19950502	US 1994-224893	19940408
	US 5302584	A	19940412	US 1993-54655	19930423
PRAI	US 1992-960597	B2	19921013		
	US 1993-54655	A3	19930423		
	US 1993-160984	B2	19931201		

OS MARPAT 123:83100

AB 42- And/or 31-esters of rapamycin with carbamic acids are useful as immunosuppressive, antiinflammatory, antifungal, antiproliferative, and antitumor agents. Thus, rapamycin was treated with 4-O₂NC₆H₄O₂CCl to give the 42-p-nitrophenyl carbonate which was treated with NH₃ to give the 42-carbamate. The latter compd. had an IC₅₀ in the lymphocyte proliferation test of 1.7 nM.

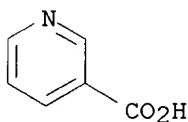
IT 59-67-6, Nicotinic acid, reactions

RL: RCT (Reactant)

(prepn. of **immunosuppressant** rapamycin carbamates)

RN 59-67-6 HCAPLUS

CN 3-Pyridinecarboxylic acid (9CI) (CA INDEX NAME)



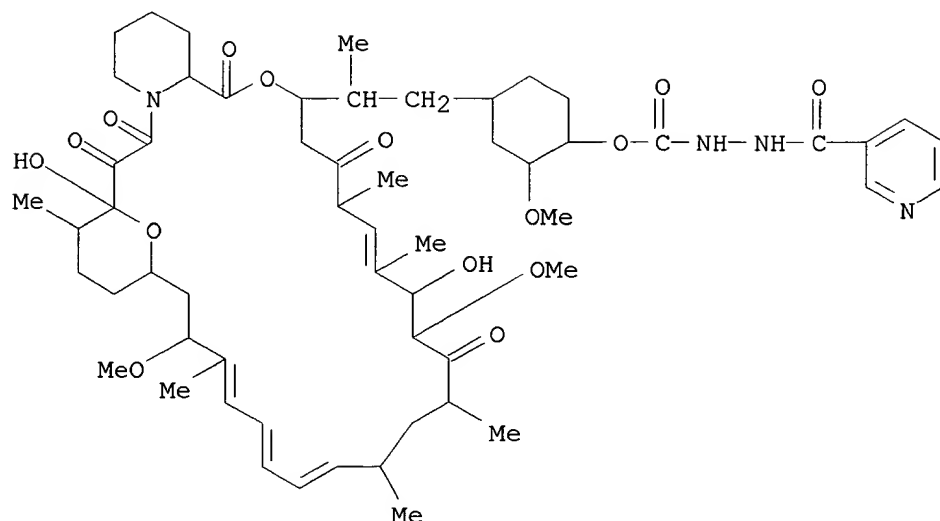
IT 165124-31-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of **immunosuppressant** rapamycin carbamates)

RN 165124-31-2 HCAPLUS

CN Rapamycin, 42-ester with 3-pyridinecarboxylic acid 2-carboxyhydrazide (9CI) (CA INDEX NAME)



L9 ANSWER 5 OF 29 HCAPLUS COPYRIGHT 2002 ACS

AN 1994:435336 HCAPLUS

DN 121:35336

TI Pyridine derivatives, their production and use as pharmaceuticals

IN Takatani, Muneo; Saijo, Taketoshi; Tomimatsu, Kiminori

PA Takeda Chemical Industries, Ltd., Japan

SO Can. Pat. Appl., 320 pp.

CODEN: CPXXEB

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 2068255	AA	19921111	CA 1992-2068255	19920508
	EP 522606	A2	19930113	EP 1992-201288	19920507
	EP 522606	A3	19930505		
	EP 522606	B1	19960403		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, PT, SE				
	US 5246948	A	19930921	US 1992-880641	19920507
	EP 612729	A2	19940831	EP 1994-107873	19920507
	EP 612729	A3	19940907		
	EP 612729	B1	19970423		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, PT, SE				
	AT 136296	E	19960415	AT 1992-201288	19920507
	AT 152102	E	19970515	AT 1994-107873	19920507
	JP 05125048	A2	19930521	JP 1992-115871	19920508
	US 5389658	A	19950214	US 1993-81181	19930624
	US 5457106	A	19951010	US 1994-334221	19941104
	US 5561147	A	19961001	US 1995-455170	19950531
	US 5767121	A	19980616	US 1996-717022	19960920
PRAI	JP 1991-105691		19910510		
	EP 1992-201288		19920507		
	US 1992-880641		19920507		
	US 1993-81181		19930624		
	US 1994-334221		19941104		
	US 1995-455170		19950531		

OS MARPAT 121:35336

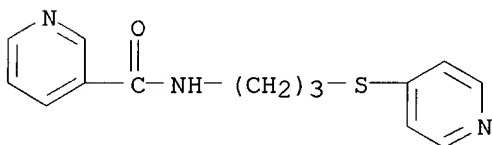
AB Pyridines R-X-A-N(R3)-CHR4-Y [R = (un)substituted pyridyl; X = O, S, SO, SO2; A = C1-15 bivalent hydrocarbon residue with (un)substituted branched moiety; Y = O, S; R3 = H, hydrocarbyl; R4 = hydrocarbyl, heterocyclyl; R3R4 joined with (thio)carbonyl group to form (un)substituted heterocyclyl; R3, R4 independently attached to A to form a ring] and their pharmaceutically acceptable salts were prepd. Their immunomodulatory activity or adhesion protein expression inhibitory activity as well as inflammation inhibitory, antipyretic, and analgesic activities are claimed. For example, among specifically claimed compds. is the benzothiophenecarboxamide I.

IT 155965-84-7P 155966-29-3P 155966-77-1P

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as inflammation inhibitor, antipyretic, analgesic, antiallergic or **immunosuppressant**)

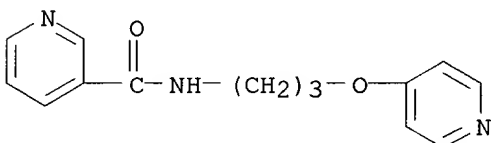
RN 155965-84-7 HCAPLUS

CN 3-Pyridinecarboxamide, N-[3-(4-pyridinylthio)propyl]- (9CI) (CA INDEX NAME)



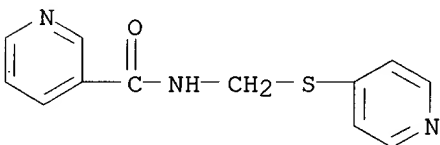
RN 155966-29-3 HCAPLUS

CN 3-Pyridinecarboxamide, N-[3-(4-pyridinyloxy)propyl]- (9CI) (CA INDEX NAME)



RN 155966-77-1 HCAPLUS

CN 3-Pyridinecarboxamide, N-[(4-pyridinylthio)methyl]- (9CI) (CA INDEX NAME)



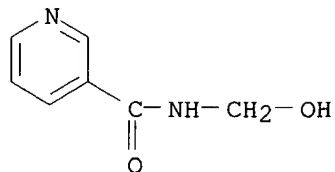
IT 3569-99-1, N-(Hydroxymethyl)nicotinamide

RL: RCT (Reactant)

(reaction of, in prepn. of **immunosuppressant** pyridines)

RN 3569-99-1 HCAPLUS

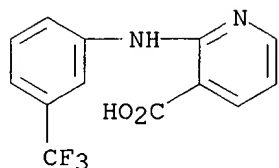
CN 3-Pyridinecarboxamide, N-(hydroxymethyl)- (9CI) (CA INDEX NAME)



L9 ANSWER 6 OF 29 HCAPLUS COPYRIGHT 2002 ACS
 AN 1994:260808 HCAPLUS
 DN 120:260808
 TI Restoration of postburn impaired lymphocyte responsiveness by nonsteroidal anti-inflammatory drugs is independent of prostaglandin E2 inhibition
 AU Mathieu, Jacques; Masson, Isabelle; Chancerelle, Yves; Chanaud, Brigitte; Strazlko, Suzanne; De Sousa, Martine; Kergonou, Jean Francois; Giroud, Jean Paul; Florentin, Irene
 CS Unite Radiobiochim., Cent. Rech. Serv. Sante Armees, Paris, Fr.
 SO J. Leukocyte Biol. (1994), 55(1), 64-72
 CODEN: JLBIE7; ISSN: 0741-5400
 DT Journal
 LA English
 AB Prostaglandin E2 (PGE2) has been implicated in postburn immunosuppression, which is responsible for septic complications. In the present work, seven nonsteroidal anti-inflammatory drugs (NSAIDs), differing by their capacity to inhibit the cyclooxygenase pathway, were compared for their ability to restore T lymphocyte proliferative responses evaluated 4 days after thermal injury in rats. Salicylic acid, 5-aminosalicylic acid, and niflumic acid, given daily, fully restored spleen cell responses to Con A (Con A) and phytohemagglutinin. These drugs were active only at doses that were below the anti-inflammatory doses and did not modify normal spleen cell responses. In these conditions, indomethacin slightly restored lymphocyte reactivity, whereas acetylsalicylic acid, ketoprofen, and piroxicam were ineffective. PGE2 prodn. by Con A-stimulated spleen cells from untreated burned rats and after treatment with niflumic acid or 5-aminosalicylic acid did not correlate with the intensity of the proliferative response. Indomethacin, niflumic acid, and 5-aminosalicylic acid were added in vitro to spleen cells from normal and burned rats, at concns. from 10⁻⁷ to 10⁻⁴ M. PGE2 prodn. was strongly depressed by indomethacin and niflumic acid and not modified by 5-aminosalicylic acid. The proliferative response of normal spleen cells were depressed in a concn.-dependent manner by niflumic acid and slightly inhibited at the highest concns. of indomethacin. In contrast, indomethacin concn. dependently restored the burn-impaired proliferative response, whereas niflumic acid further depressed it and 5-aminosalicylic acid had no effect. These results demonstrate that only some NSAIDs are able to restore T lymphocyte reactivity impaired after thermal injury and that this property is not related to inhibition of PGE2 prodn.

IT **4394-00-7, Niflumic acid**
 RL: BIOL (Biological study)
 (T-lymphocyte proliferative response restoration by, in postburn immunosuppression)

RN 4394-00-7 HCAPLUS
 CN 3-Pyridinecarboxylic acid, 2-[[3-(trifluoromethyl)phenyl]amino]- (9CI)
 (CA INDEX NAME)



L9 ANSWER 7 OF 29 HCAPLUS COPYRIGHT 2002 ACS

AN 1994:192219 HCAPLUS

DN 120:192219

TI Preparation of deoxyribonucleoside derivatives as carcinostatics, virucides, and immunosuppressants

IN Togo, Hideo; Ishigami, Sachiko; Fujii, Misa; Yokoyama, Masataka

PA Nippon Kayaku Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05306283	A2	19931119	JP 1992-131363	19920427
OS	MARPAT 120:192219				

AB The title derivs. I (R1 = H, OH protecting group), their physiol. acceptable salts, II (R2 = H, Me; R3 = H, OH protecting group), and their physiol. acceptable salts are prepd. as carcinostatics, virucides, and immunosuppressants (no data). Photoirradn. of a mixt. of 4,6-dibenzoyl-2,5-anhydro-3-deoxy-.beta.-ribohexonic acid (III) and [bis(trifluoroacetoxy)iodo]pentafluorobenzene (IV), and lepidine in CH2Cl2 for 10 h gave 56% (1.beta.)-1-(2-lepidinyl)-3,5-dibenzoyl-D-deoxyribofuranose. Photoirradn. of a mixt. of III, IV, and Me nicotinate in CH2Cl2 for 10 h gave 42% (1.alpha.)-1-[2-(5-methoxycarbonylpyridyl)]-3,5-dibenzoyl-D-deoxyribofuranose.

IT **145383-45-5P 153765-72-1P**

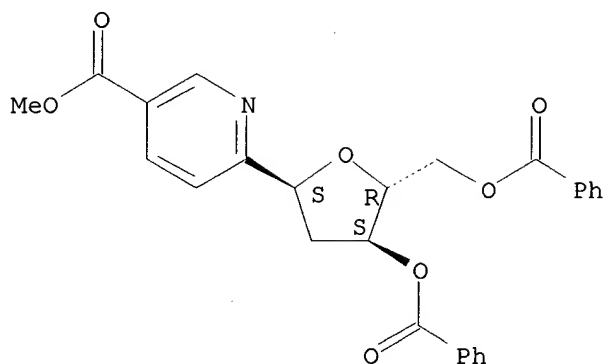
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of, as carcinostatic and virucide and immunosuppressant)

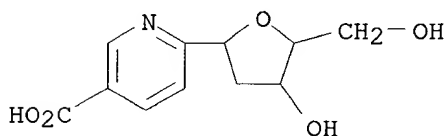
RN 145383-45-5 HCAPLUS

CN 3-Pyridinecarboxylic acid, 6-(3,5-di-O-benzoyl-2-deoxy-.alpha.-D-erythro-pentofuranosyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



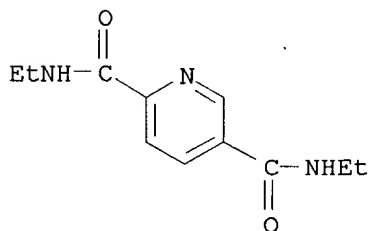
RN 153765-72-1 HCAPLUS
 CN 3-Pyridinecarboxylic acid, 6-(2-deoxy-.alpha.-D-erythro-pentofuranosyl)-
 (9CI) (CA INDEX NAME)



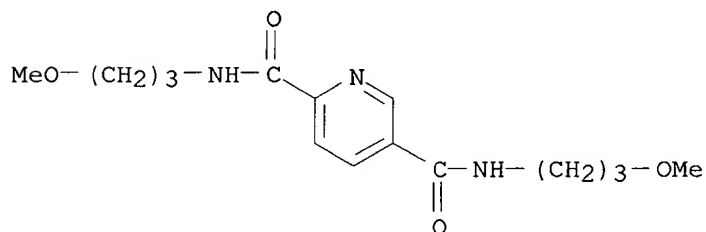
L9 ANSWER 8 OF 29 HCAPLUS COPYRIGHT 2002 ACS
 AN 1992:214352 HCAPLUS
 DN 116:214352
 TI Preparation of 2,4- and 2,5-substituted pyridine N-oxides as
 fibrosuppressive and immunosuppressive agents
 IN Baader, Ekkehard; Bickel, Martin; Guenzler-Pukall, Volkmar
 PA Hoechst A.-G., Germany
 SO Eur. Pat. Appl., 26 pp.
 CODEN: EPXXDW
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 463592	A1	19920102	EP 1991-110343	19910622
	EP 463592	B1	19940817		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	DE 4020570	A1	19920102	DE 1990-4020570	19900628
	ES 2061118	T3	19941201	ES 1991-110343	19910622
	FI 9103118	A	19911229	FI 1991-3118	19910626
	FI 101070	B	19980415		
	IL 98629	A1	19960514	IL 1991-98629	19910626
	CZ 283782	B6	19980617	CZ 1991-1959	19910626
	CA 2045868	AA	19911229	CA 1991-2045868	19910627
	NO 9102541	A	19911230	NO 1991-2541	19910627
	NO 178026	B	19951002		
	NO 178026	C	19960110		
	AU 9179356	A1	19920102	AU 1991-79356	19910627
	AU 636990	B2	19930513		

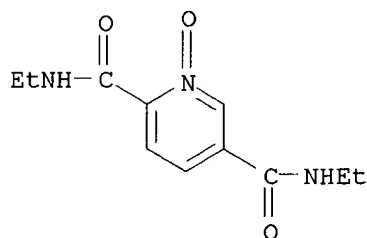
CN 1057649	A	19920108	CN 1991-104308	19910627
CN 1038585	B	19980603		
BR 9102699	A	19920204	BR 1991-2699	19910627
ZA 9104958	A	19920325	ZA 1991-4958	19910627
HU 59104	A2	19920428	HU 1991-2158	19910627
HU 214627	B	19980428		
JP 04230264	A2	19920819	JP 1991-156562	19910627
JP 08032687	B4	19960329		
US 5260323	A	19931109	US 1992-978467	19921119
LV 10431	B	19960220	LV 1993-284	19930504
LT 3918	B	19960425	LT 1993-1464	19931112
PRAI DE 1990-4020570		19900628		
US 1991-721681		19910626		
OS MARPAT 116:214352				
AB	Title compds. I [R1 = COXR3; X = O, NR; R3 = H, (substituted) alkyl, alkenyl, alkynyl, cycloalkyl, aryl, heteroaryl, etc.; R = R3 or NRR3 = Q; n = 1-3; A = O, S, CH2, NR7; R7 = H, (substituted) Ph, alkyl, alkenyl, alkynyl, alkoxy carbonyl, cycloalkyl; R2 = COXR3; with provisos] were prepd. as proline- and lysine hydroxylase inhibitors useful as fibrosuppressive and immunosuppressive agents. Thus, N-oxidn. of 1 g bis[N,N'-2-methoxyethyl]pyridine-2,4-dicarboxamide by 0.62 g m-chloroperbenzoic acid gave 620 mg of the bis(N,N'-2-methoxyethyl)pyridine-2,4-dicarboxamide N-oxide (II). II was tested as a proline hydroxylase inhibitor.			
IT	117517-21-2 139994-18-6			
	RL: RCT (Reactant)			
	(N-oxidn. of, by chloroperbenzoic acid, in prepn. of fibrosuppressive and immunosuppressive agents)			
RN	117517-21-2 HCAPLUS			
CN	2,5-Pyridinedicarboxamide, N,N'-diethyl- (9CI) (CA INDEX NAME)			



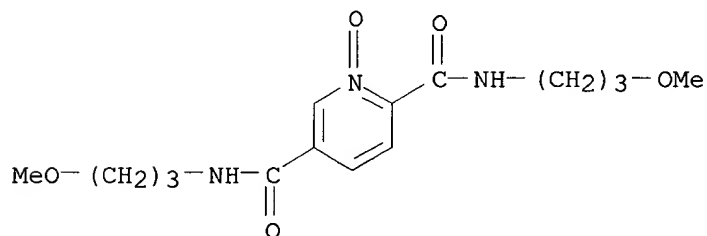
RN 139994-18-6 HCAPLUS
 CN 2,5-Pyridinedicarboxamide, N,N'-bis(3-methoxypropyl)- (9CI) (CA INDEX NAME)



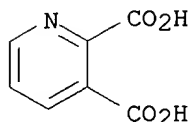
IT **139994-07-3P 139994-08-4P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, as fibrosuppressive and **immunosuppressive** agent)
 RN 139994-07-3 HCAPLUS
 CN 2,5-Pyridinedicarboxamide, N,N'-diethyl-, 1-oxide (9CI) (CA INDEX NAME)



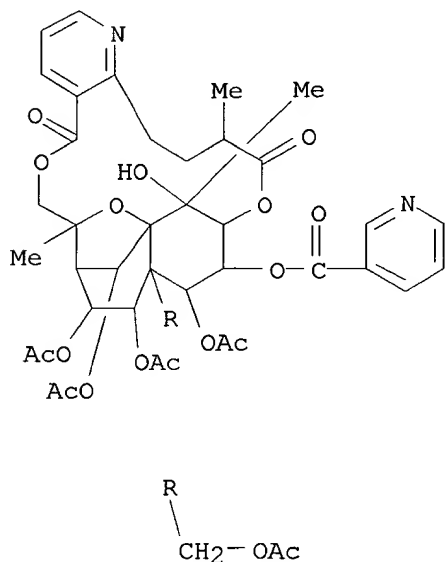
RN 139994-08-4 HCAPLUS
 CN 2,5-Pyridinedicarboxamide, N,N'-bis(3-methoxypropyl)-, 1-oxide (9CI) (CA INDEX NAME)



L9 ANSWER 9 OF 29 HCAPLUS COPYRIGHT 2002 ACS
 AN 1989:229997 HCAPLUS
 DN 110:229997
 TI Binding of organic acids to surface receptors of lymphocytes as an immunosuppressive mechanism in uremia
 AU Sanaka, Tsutomu; Hayasaka, Yutaro; Kawashima, Yoichiro; Takuma, Takehide; Sugino, Nobuhiro; Ota, Kazuo; Gulyassy, Paul F.
 CS Kidney Cent., Tokyo Women's Med. Coll., Tokyo, Japan
 SO Adv. Exp. Med. Biol. (1987), 223(Uremic Toxins), 165-9
 CODEN: AEMBAP; ISSN: 0065-2598
 DT Journal
 LA English
 AB Org. acids (protein-binding inhibitors, PB-Ix) from blood of a renal failure patient probably bind to the surface of lymphocytes and exert inhibitory effects on mitogen receptors and Leu4 and HLA-DR antigens.
 IT **89-00-9, Quinolinic acid**
 RL: BIOL (Biological study)
 (lymphocytes response to, **immunosuppression** by protein-binding inhibitors in blood of humans in uremia in relation to)
 RN 89-00-9 HCAPLUS
 CN 2,3-Pyridinedicarboxylic acid (8CI, 9CI) (CA INDEX NAME)



L9 ANSWER 10 OF 29 HCAPLUS COPYRIGHT 2002 ACS
 AN 1988:87738 HCAPLUS
 DN 108:87738
 TI Studies on the sesquiterpene alkaloids of *Tripterygium wilfordii* Hook. F
 AU Deng, Fuxiao; Cao, Jianhong; Xia, Zhilin; Lin, Sui; Wang, Xiaoyi
 CS Fujian Inst. Med. Sci., Fuzhou, Peop. Rep. China
 SO Zhiwu Xuebao (1987), 29(5), 523-6
 CODEN: CHWHAY; ISSN: 0577-7496
 DT Journal
 LA Chinese
 AB Euonine (I) was isolated from the roots of *T. wilfordii*. A new sesquiterpene alkaloid, named wilfornine (II), was also isolated. Both I and II had immunosuppressive activities in mice.
 IT **112899-84-0**
 RL: BIOL (Biological study)
 (of *Tripterygium wilfordii*, isolation of and **immunosuppression** from)
 RN 112899-84-0 HCAPLUS
 CN 3-Pyridinecarboxylic acid, (8R,9R,10R,11S,12S,13R,14R,15S,18S,21S,22R,23R)-10,13,22,23-tetrakis(acetyloxy)-12-[(acetyloxy)methyl]-7,8,9,10,12,13,14,15,17,18,19,20-dodecahydro-21-hydroxy-8,18,21-trimethyl-5,17-dioxo-8,11-epoxy-9,12-ethano-11,15-methano-5H,11H-[1,9]dioxacyclooctadecino[4,3-b]pyridin-14-yl ester (9CI) (CA INDEX NAME)



L9 ANSWER 11 OF 29 HCAPLUS COPYRIGHT 2002 ACS

AN 1986:454617 HCAPLUS
 DN 105:54617
 TI Pyridine-2,4- and 2,5-dicarboxylic acid esters as drugs for inhibition of proline and lysine hydroxylase
 IN Guenzler, Volkmar; Hanauske-Abel, Hartmut; Mohr, Juergen; Tschank, Georg; Kivirikko, Kari; Majamaa, Kari; Brocks, Dietrich
 PA Hoechst A.-G., Fed. Rep. Ger.
 SO Ger. Offen., 7 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3432094	A1	19860306	DE 1984-3432094	19840831
	EP 176741	A1	19860409	EP 1985-110498	19850821
	EP 176741	B1	19881026		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	AT 38222	E	19881115	AT 1985-110498	19850821
	ES 546527	A1	19860716	ES 1985-546527	19850829
	US 4717727	A	19880105	US 1985-770676	19850829
	DK 8503977	A	19860301	DK 1985-3977	19850830
	DK 166127	B	19930315		
	DK 166127	C	19930809		
	AU 8546928	A1	19860306	AU 1985-46928	19850830
	AU 588826	B2	19890928		
	JP 61060655	A2	19860328	JP 1985-189996	19850830
	JP 06041412	B4	19940601		
	ZA 8506646	A	19860528	ZA 1985-6646	19850830
	CA 1246456	A1	19881213	CA 1985-489741	19850830
PRAI	DE 1984-3432094		19840831		
	EP 1985-110498		19850821		

AB The title alkyl esters are inhibitors of proline and lysine hydroxylases useful as antifibrotics and immunosuppressants and for treatment of disorders in collagen metab. and complement Clq formation. For example, di-Et pyridine-2,4-dicarboxylate at 10 .mu.M caused 70% inhibition of conversion of proline-14C to hydroxyproline-14C in the collagen of isolated calvaria, compared to 50% inhibition at 670 .mu.M for the free acid.

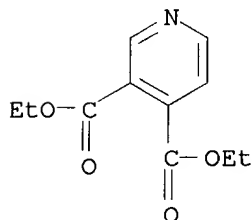
IT **1678-52-0 5552-44-3**

RL: BIOL (Biological study)

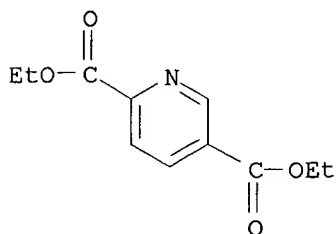
(as antifibrotic and **immunosuppressant**, lysine and proline hydroxylase inhibition in relation to)

RN 1678-52-0 HCAPLUS

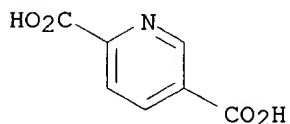
CN 3,4-Pyridinedicarboxylic acid, diethyl ester (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 5552-44-3 HCAPLUS
CN 2,5-Pyridinedicarboxylic acid, diethyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT **100-26-5D**, alkyl esters
RL: BIOL (Biological study)
(as antifibrotics and **immunosuppressants**, lysine and proline hydroxylase inhibition in relation to)
RN 100-26-5 HCAPLUS
CN 2,5-Pyridinedicarboxylic acid (8CI, 9CI) (CA INDEX NAME)



L9 ANSWER 12 OF 29 HCAPLUS COPYRIGHT 2002 ACS
AN 1985:161680 HCAPLUS
DN 102:161680
TI Mechanism of deoxyadenosine and 2-chlorodeoxyadenosine toxicity to nondividing human lymphocytes
AU Seto, Shiro; Carrera, Carlos J.; Kubota, Masaru; Wasson, D. Bruce; Carson, Dennis A.
CS Dep. Basic Clin. Res., Scripps Clin. Res. Found., La Jolla, CA, 92037, USA
SO J. Clin. Invest. (1985), 75(2), 377-83
CODEN: JCINAO; ISSN: 0021-9738
DT Journal
LA English
AB The sequential metabolic changes induced in nondividing human peripheral blood lymphocytes by incubation with deoxyadenosine (I) [958-09-8] + deoxycoformycin, or with 2-chlorodeoxyadenosine (CdA) [4291-63-8], an adenosine deaminase (ADA) resistant I congener with antileukemic and **immunosuppressive** properties were examd. The lymphotoxic effect of I and CdA required their phosphorylation, and was inhibited by deoxycytidine [951-77-9]. As early as 4 h after exposure to the deoxynucleosides, strand breaks in lymphocyte DNA began to accumulate, and RNA synthesis decreased. These changes were followed by a significant fall in intracellular NAD [53-84-9] levels at 8 h, a drop in ATP [56-65-5] pools at 24 h, and cell death by 48 h. Incubation of the lymphocytes with 5 mM nicotinamide [98-92-0], a NAD precursor and an inhibitor of poly(ADP-ribose) synthetase, prevented NAD depletion. The nicotinamide treatment also rendered the lymphocytes highly resistant

to deoxyadenosine and CdA toxicity, without altering dATP [1927-31-7] formation or the accumulation of DNA strand breaks. The poly(ADP-ribose) synthetase inhibitor 3-aminobenzamide [3544-24-9] exerted a similar although less potent effect. These results suggest that NAD depletion, probably triggered by poly(ADP-ribose) formation, is the principle cause of death in normal resting human lymphocytes exposed to I + deoxycoformycin, or to CdA.

L9 ANSWER 13 OF 29 HCAPLUS COPYRIGHT 2002 ACS

AN 1985:154808 HCAPLUS

DN 102:154808

TI Immunoregulating formulations containing chroman derivatives

PA Kuraray Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

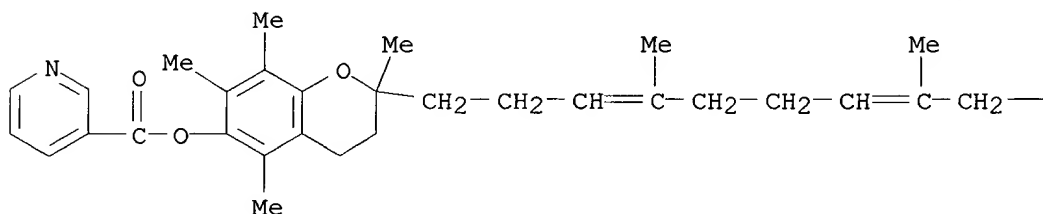
DT Patent

LA Japanese

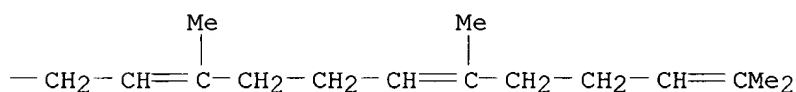
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59222414	A2	19841214	JP 1983-97596	19830531
AB	Immunoregulating formulations contain chroman compds. I where n = 5.apprx.9. Thus, 2,5,7,8-tetramethyl-2-(4,8,12,16,20,24-hexamethylpentacosyl)-6-cromanol (II) [95653-38-6] 10, beeswax 1, hydroxypropyl cellulose 3, cryst. cellulose 30, lactose 30, corn starch 20, and CM cellulose Ca 5 g were mixed with 30 mL H2O and made into tablets (100 mg/tablet). Methods for the prepn. of a no. of I are described. E.g., 2,3,5-trimethylhydroquinone [700-13-0] was treated with 3,7,11,15,19,23,27-heptamethyloctacosyl-1,6,10,14,18,22,26-heptaen-3-ol [95653-47-7] in the presence of BF3.OEt2 to give II.				
IT	95653-50-2P RL: PREP (Preparation) (prepn. of, for immunosuppressant formulations)				
RN	95653-50-2 HCAPLUS				
CN	3-Pyridinecarboxylic acid, 3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12,16,20-pentamethyl-3,7,11,15,19-heneicosapentaenyl)-2H-1-benzopyran-6-yl ester (9CI) (CA INDEX NAME)				

PAGE 1-A



PAGE 1-B



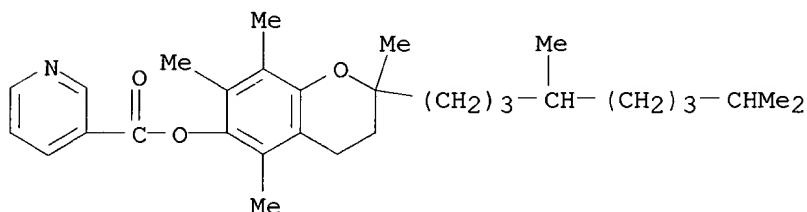
L9 ANSWER 14 OF 29 HCAPLUS COPYRIGHT 2002 ACS
 AN 1985:154807 HCAPLUS
 DN 102:154807
 TI Immunosuppressant formulations containing chroman derivatives
 PA Kuraray Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59222415	A2	19841214	JP 1983-97597	19830531

AB Immunosuppressant formulation contain chroman derivs. I (R = C1-11 alkyl). Thus, 2,5,7,8-tetramethyl-2-(4,8-dimethylnonyl)-6-chromanol (II) [16171-35-0] 10, beeswax 1, hydroxypropyl cellulose 3, cryst. cellulose 30, lactose 30, corn starch 20, and CM cellulose Ca 5 g were mixed with 30 mL H2O and made into tablets (100 mg/tablet). Methods for the prepn. of several I compds. are described. E.g., II was prepd. by the reaction of 2,3,5-trimethylhydroquinone [700-13-0] with 3,7,11-trimethyldodec-2-enyl bromide [95653-63-7] in the presence of an acid catalyst.

IT **95653-59-1P**
 RL: PREP (Preparation)
 (prepn. of, for **immunosuppressant** pharmaceuticals)

RN 95653-59-1 HCAPLUS
 CN 3-Pyridinecarboxylic acid, 2-(4,8-dimethylnonyl)-3,4-dihydro-2,5,7,8-tetramethyl-2H-1-benzopyran-6-yl ester (9CI) (CA INDEX NAME)



L9 ANSWER 15 OF 29 HCAPLUS COPYRIGHT 2002 ACS
 AN 1978:484502 HCAPLUS
 DN 89:84502
 TI Effects of antirheumatics on lymphocytes in culture
 AU Binderup, L.; Bramm, E.; Arrigoni-Martelli, E.
 CS Dep. Pharmacol., Leo Pharm. Prod., Ballerup, Den.
 SO Drugs Exp. Clin. Res. (1977), 2(1), 181-8
 CODEN: DECRDP
 DT Journal
 LA English
 AB Basal and concanavalin A-stimulated thymidine-3H incorporation by rat lymph node lymphocytes was inhibited by nonsteroidal antiinflammatory drugs and **immunosuppressive** drugs, whether the lymphocytes were exposed to the drugs during the entire culture period or were preincubated with them. D-Penicillamine [52-67-5], levamisole [14769-73-4], chloroquine [54-05-7] and 5-mercaptopyridoxine [2545-66-6] all

enhanced the concanavalin A-stimulated incorporation of thymidine-3H when the lymphocytes were preincubated with them, prior to exposure to mitogen. This modification of the classical lymphocyte transformation test might provide an approach to in vitro evaluation of potentially useful antirheumatics.

L9 ANSWER 16 OF 29 HCAPLUS COPYRIGHT 2002 ACS

AN 1978:400554 HCAPLUS

DN 89:554

TI Study of the effect of immunosuppressants on the interrelation of nucleic acids and nicotinamide nucleotides in rheumatic tissues

AU Miskinyte, G.; Jusiene, J.; Astrauskas, V.

CS Inst. Eksp. Klin. Med., Vilnius, USSR

SO Mater. Biokhim. Konf. Pribalt. Resp. B. SSR, 5th (1976), Volume 1, 84-5.

Editor(s): Sibul, I. K. Publisher: Akad. Nauk Est. SSR, Tallinn, USSR.

CODEN: 38BKAW

DT Conference

LA Russian

AB In rabbits with exptl. arthritis, plasma nucleic acid levels were decreased; the concn. of RNA and DNA in the spleen were unaffected. Treatment with cyclophosphane [50-18-0] plus azathioprine [446-86-6] (10 mg/kg, each) or with 20 mg/kg of either compd. alone decreased DNA; only azathioprine alone decreased RNA. Cyclophosphane plus azathioprine or cyclophosphane alone increased NAD [53-84-9] and NADP [53-59-8], azathioprine decreased both nicotinamide nucleotides. In livers of arthritic rabbits, RNA and DNA concns. were increased and NAD and NADP concns. were decreased. The **immunosuppressants** had no effect on DNA; RNA was increased by either compd. alone or by the combined treatment. The **immunosuppressants** decreased nicotinamide nucleotides when given together or sep.

IT 53-59-8 53-84-9

RL: BIOL (Biological study)

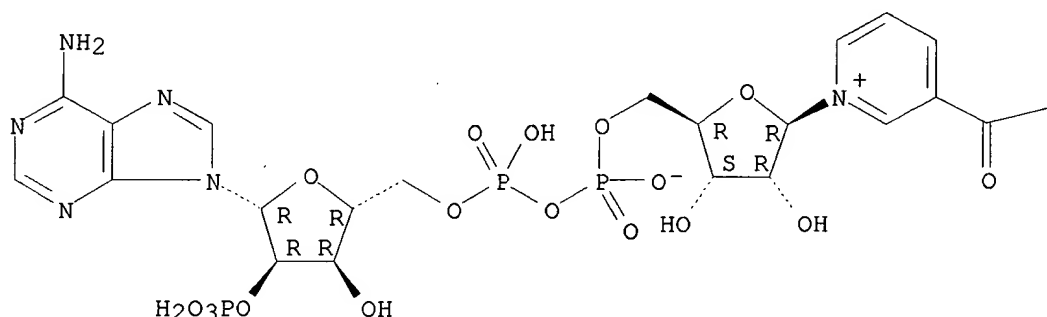
(of liver and spleen, in arthritis, **immunosuppressant** effect on)

RN 53-59-8 HCAPLUS

CN Adenosine 5'-(trihydrogen diphosphate), 2'-(dihydrogen phosphate), P'.fwdarw.5'-ester with 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

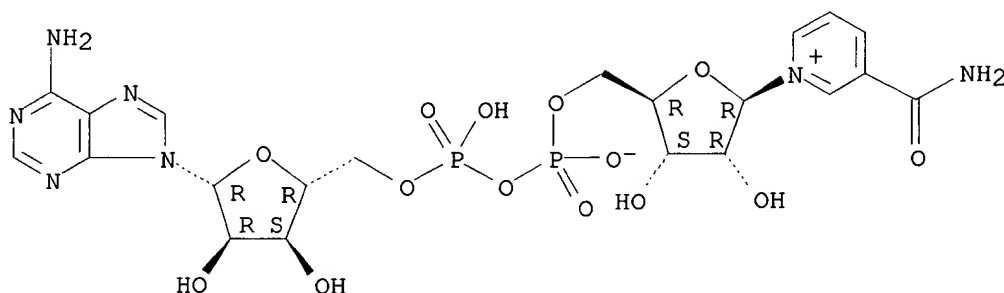


—NH₂

RN 53-84-9 HCAPLUS

CN Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with
3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium, inner salt (9CI)
(CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 17 OF 29 HCAPLUS COPYRIGHT 2002 ACS

AN 1977:448117 HCAPLUS

DN 87:48117

TI Effect of coamide on immunogenesis in antibiotic therapy

AU Nikolaev, A. I.; Nazarmukhamedova, M. N.

CS Uzb. Res. Inst. Epidemiol., Microbiol. Infect. Dis., Tashkent, USSR

SO Antibiotiki (Moscow) (1977), 22(5), 460-5

CODEN: ANTBAL

DT Journal

LA Russian

AB Oxytetracycline [79-57-2] (500 or 1000 .mu.g) and monomycin [54597-56-7] (250, 500, or 1000 .mu.g) injected i.m. into mice daily for 4 days before immunization with sheep erythrocytes had an **immunosuppressive** effect, inhibiting both the spleen antibody-producing cells and the hemagglutinin titer. Coamide [6856-47-9] (0.5 mg) given s.c. daily for 5 days beginning with immunization to the antibiotic-treated animals increased the no. of antibody producing cells and hemagglutinin titers.

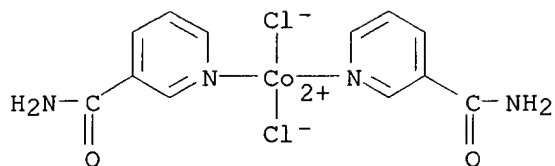
IT **6856-47-9**

RL: BIOL (Biological study)

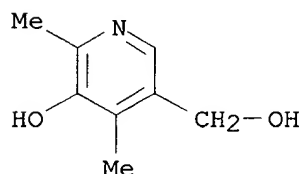
(immunosuppression by antibiotics antagonism by)

RN 6856-47-9 HCAPLUS

CN Cobalt, dichlorobis(3-pyridinecarboxamide-N1)-, (T-4)- (9CI) (CA INDEX NAME)



L9 ANSWER 18 OF 29 HCAPLUS COPYRIGHT 2002 ACS
 AN 1977:153796 HCAPLUS
 DN 86:153796
 TI Immunosuppression under vitamin B6 deficiency. Experimental studies with skin transplants in inbred mice
 AU Dobbelstein, H.; Baumgaertner, R.; Schubert, G.; Thoenes, G.
 CS I. Mediz. Klin., Univ. Muenchen, Munich, Ger.
 SO Res. Exp. Med. (1977), 169(3), 189-202
 CODEN: REXMAS
 DT Journal
 LA German
 AB Skin graft rejection was used to det. the immunosuppressive effects of vitamin B6 deficiency in mice. Results showed that diet-induced deficiency was not specific. But marked immunosuppression was obsd. in mice treated with a vitamin B6 antagonist (i.e., deoxypyridoxine at 100 .mu.g/100 g body wt.). Thus, vitamin B6 may be required for normal immune responses.
 IT **61-67-6**
 RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
 (immunosuppressant activity of)
 RN 61-67-6 HCAPLUS
 CN 3-Pyridinemethanol, 5-hydroxy-4,6-dimethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)



L9 ANSWER 19 OF 29 HCAPLUS COPYRIGHT 2002 ACS
 AN 1976:575421 HCAPLUS
 DN 85:175421
 TI Nicotinamide: suppression of lymphocyte transformation with a component identified in human transfer factor
 AU Burger, Denis R.; Vandenbark, Arthur A.; Daves, Doyle; Anderson, William A., Jr.; Vetto, R. Mark; Finke, Patricia
 CS Surg. Res. Lab., VA Hosp., Portland, Oreg., USA
 SO J. Immunol. (1976), 117(3), 797-801
 CODEN: JOIMA3
 DT Journal
 LA English
 AB The component in human transfer factor (TF) (Fraction IV, from exclusion

chromatog. on Sephadex G-25) responsible for suppression of antigen-induced lymphocyte transformation was previously identified as nicotinamide. Com. nicotinamide was subsequently shown to produce suppression of antigen-induced responses in vitro previously obsd. with TF Fraction IV. Nicotinamide was found to be nontoxic at the highest concns. employed (10-2M) and suppressive over a relatively broad range (10-5-10-2M). The suppression appeared to be related to the magnitude of antigen- or mitogen-induced transformation and was apparent even when nicotinamide was added as late as 48 hr after stimulant addn.

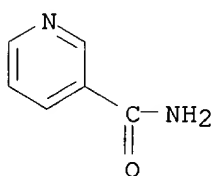
IT 98-92-0

RL: BIOL (Biological study)

(immunosuppressant, allergy transfer factor in relation to)

RN 98-92-0 HCAPLUS

CN 3-Pyridinecarboxamide (9CI) (CA INDEX NAME)



L9 ANSWER 20 OF 29 HCAPLUS COPYRIGHT 2002 ACS

AN 1976:456769 HCAPLUS

DN 85:56769

TI The effect of clonixin, betamethasone and cyclophosphamide on endotoxin-induced cellular mobilization

AU Watnick, A. S.; Gilchrest, H.; Kearney, S.; Sabin, C.

CS Schering Corp., Bloomfield, N. J., USA

SO Future Trends Inflammation, Proc. Int. Meet. (1974), Meeting Date 1973, 235-47. Editor(s): Velo, G. P.; Willoughby, D. A.; Giroud, J. P. Publisher: Piccin Med. Books, Padua, Italy.

CODEN: 33IWAY

DT Conference

LA English

AB Betamethasone (I) [378-44-9] and clonixin [17737-65-4]

suppressed the total no. of free cells mobilized into the rat peritoneum 5 and 24 hr following an i.p. injection of endotoxin. These agents also inhibited paw edema 5 hr after carrageenan injection. Cyclophosphamide [50-18-0], an **immunosuppressant**, also suppressed the no. of cells mobilized by endotoxin but only at doses which decreased the circulating white cell count. Cyclophosphamide did not significantly inhibit carrageenan induced edema. Thus, edema formation may not be directly correlated with cellular mobilization.

L9 ANSWER 21 OF 29 HCAPLUS COPYRIGHT 2002 ACS

AN 1976:456666 HCAPLUS

DN 85:56666

TI Nucleic acids. 16. Orally active derivatives of ara-cytidine

AU Wechter, W. J.; Gish, D. T.; Greig, M. E.; Gray, G. D.; Moxley, T. E.;

Kuentzel, S. L.; Gray, L. G.; Gibbons, A. J.; Griffin, R. L.; Neil, G. L.

CS Res. Div., Upjohn Co., Kalamazoo, Mich., USA

SO J. Med. Chem. (1976), 19(8), 1013-17

CODEN: JMCMAR

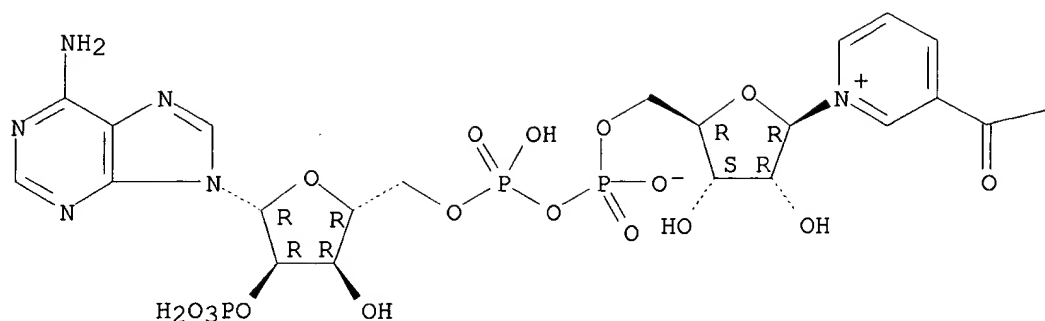
DT Journal
LA English
AB Water-sol. derivs. of aracytidine (I) [147-94-4], including 5'-palmitoyl- [59465-83-7], 5'-benzoyl- [59465-84-8], and 5'-(1-adamantoyl)aracytidine-HCl [59465-77-9] and their N4-(tert-butoxycarbonylglycyl-L-arginyl) derivs. were prepd. and tested, along with the 5'-nicotinate-HCl [59465-85-9] and 5'-quinuclidinate-2HCl [59457-00-0] of I, for antitumor, **immunosuppressive**, and antiarthritic activities. Five of the compds. had oral activity superior to I in the L1210 leukemia mouse assay, while the adamantoyl deriv. had oral activity approaching that of parenterally administered I. Four of these same compds. were also more effective **immunosuppressants** than I. None of the derivs. had significant antiinflammatory activity.

L9 ANSWER 22 OF 29 HCAPLUS COPYRIGHT 2002 ACS
AN 1976:440987 HCAPLUS
DN 85:40987
TI Interrelation of nicotinamide coenzymes and nucleic acids in rabbit tissues during experimental rheumatism following administration of immunosuppressants
AU Jusiene, J.; Miskinyte, G.
CS Nauchno-Issled. Inst. Eksp. Klin. Med., Vilnius, USSR
SO Immunodepressanty Revm. Zaboli., Mater. Vses. Nauchn. Konf. Revmatol., 6th (1974), 137-9. Editor(s): Nesterov, A. I. Publisher: Nauchno-Issled. Inst. Eksp. Klin. Med., Vilnius, USSR.
CODEN: 33GRA9
DT Conference
LA Russian
AB In rabbits, exptl. rheumatism and rheumatoid arthritis were assocd. with increases in DNA and RNA and decreases in NAD [53-84-9], NADH2 [58-68-4], NADP [53-59-8], and NADPH2 [53-57-6] in the heart and liver. Treatment of rheumatoid animals with imuran [446-86-6] (20 mg/kg/day for 1 month) had no effect on the nucleic acid or nicotinamide coenzyme content, but altered the ratio of reduced and oxidized forms of the coenzymes. Lofenal [10047-08-2] (30 mg/kg) and hisphen [2764-56-9] (40 mg/kg) given daily for 1 month decreased nucleic acid levels and increased the nicotinamide coenzyme levels in the heart and to a lesser extent in the liver. In rabbits with rheumatoid arthritis, lofenal only decreased RNA and increased NAD in the liver and hisphen increased the coenzyme in the liver and normalized DNA and the coenzymes in the heart. Apparently, during the rheumatoid process, nucleic acid synthesis was increased, whereas during **immunosuppressant** therapy nicotinamide coenzyme synthesis is increased.

IT 53-59-8 53-84-9
RL: BIOL (Biological study)
(of heart and liver, in arthritis, **immunosuppressants** effect on)
RN 53-59-8 HCAPLUS
CN Adenosine 5'-(trihydrogen diphosphate), 2'-(dihydrogen phosphate), P'.fwdarw.5'-ester with 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

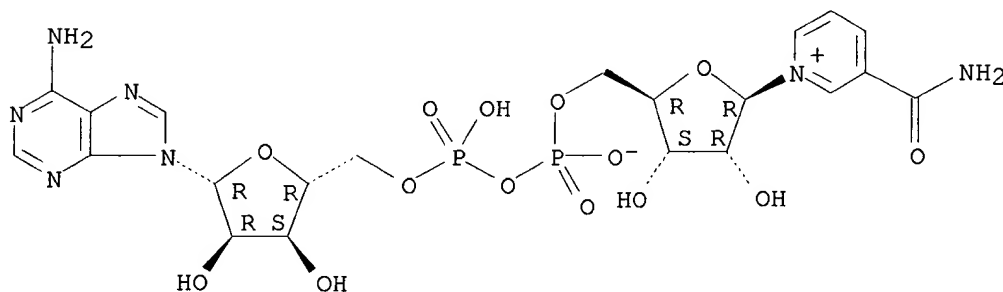


PAGE 1-B

—NH₂

RN 53-84-9 HCAPLUS
 CN Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with
 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium, inner salt (9CI)
 (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 23 OF 29 HCAPLUS COPYRIGHT 2002 ACS
 AN 1976:84168 HCAPLUS
 DN 84:84168
 TI Relation between providing an organism with pyridoxine and the
 immunological effect of 6-mercaptopurine
 AU Artemov, V. A.
 CS Kursk. Medinst., Kursk, USSR
 SO Vopr. Eksp. Klin. Immunol. (1974), 61-3. Editor(s): Krut'ko, N. F.
 Publisher: Voronezh. Gos. Med. Inst., Voronezh, USSR.
 CODEN: 32BEA6
 DT Conference
 LA Russian
 AB 6-Mercaptopurine (I) [50-44-2] (40 mg/kg/day) given i.p. to rats for 4
 days beginning on the day of immunization with sheep erythrocytes had an

immunodepressive effect. However, when rats were given optimal doses of pyridoxine [65-23-6] (30 .mu.g/day, s.c.), the immunodepressive effect of I was no longer obsd.

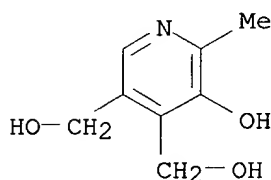
IT **65-23-6**

RL: BIOL (Biological study)

(**immunosuppression** by mercaptopurine in relation to)

RN 65-23-6 HCAPLUS

CN 3,4-Pyridinedimethanol, 5-hydroxy-6-methyl- (9CI) (CA INDEX NAME)



L9 ANSWER 24 OF 29 HCAPLUS COPYRIGHT 2002 ACS

AN 1976:15365 HCAPLUS

DN 84:15365

TI Immunosuppressor-induced changes in the content of 11-hydroxycorticosteroids, nucleic acids, and nicotinamide coenzymes during experimental rheumatism and rheumatism-arthritis

AU Miskinyte, G.; Jusiene, J.

CS Nauchno-Issled. Inst. Eksp. Klin. Med., Vilnius, USSR

SO Vopr. Endokrinol., Mater. Konf. Endokrinol., 7th (1974), Meeting Date 1973, 202-4. Editor(s): Ester, K. M. Publisher: Tartu. Gos. Univ., Tartu, USSR.

CODEN: 31TIAX

DT Conference

LA Russian

AB In liver of rabbits with exptl. rheumatism and rheumatic arthritis, 11-hydroxycorticosteroids, DNA, RNA and NADP increased and NADPH decreased. After oral administration of alkylating immunosuppressants lophenal or hisphen, the parameters changed in the opposite direction. Lophenal had most favorable normalizing effect on the parameters in rheumatic arthritis.

IT **53-59-8**

RL: BIOL (Biological study)

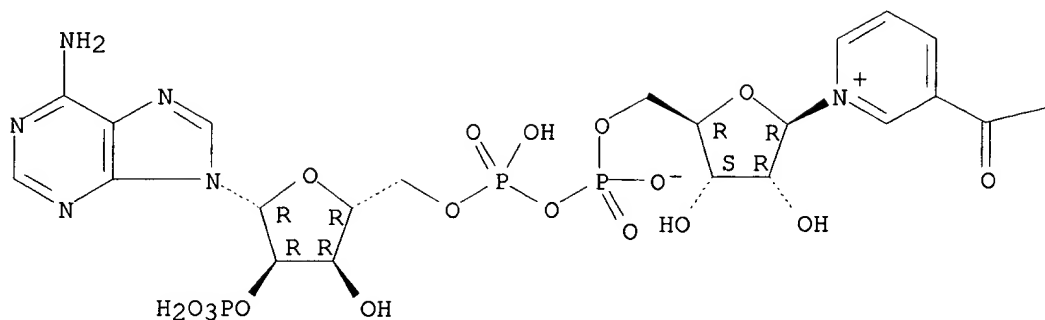
(of liver, **immunosuppressants** effect on)

RN 53-59-8 HCAPLUS

CN Adenosine 5'-(trihydrogen diphosphate), 2'-(dihydrogen phosphate), P'.fwdarw.5'-ester with 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



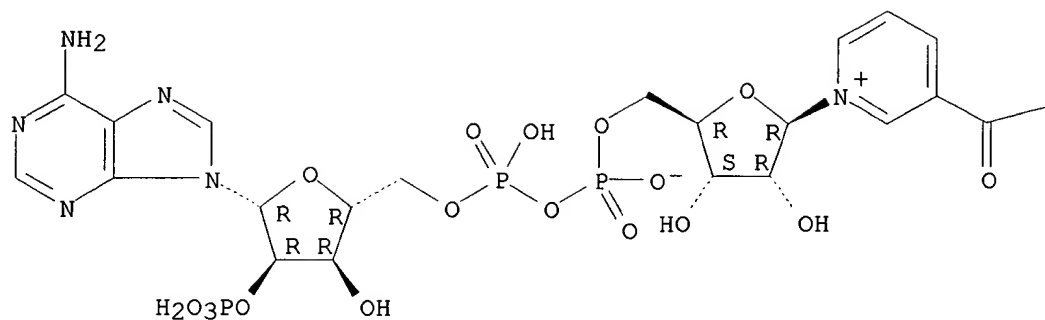
PAGE 1-B

—NH₂

L9 ANSWER 25 OF 29 HCAPLUS COPYRIGHT 2002 ACS
 AN 1975:71160 HCAPLUS
 DN 82:71160
 TI Change in the content of nicotinamide nucleotides and of nonesterified fatty acids in rabbits with experimental rheumatism and under the effect of the immunosuppressors imuran, lofenal, hisphen
 AU Jusiene, J.
 CS Nauchno-Issled Inst. Eksp. Klin. Med., Vilnius, USSR
 SO Sovrem. Probl. Biokhim. Dykhaniya Klin., Mater. Vses. Konf., 2nd (1972), Meeting Date 1971, Volume 2, 11-12. Editor(s): Usol'tseva, V. A. Publisher: Ivanov. Gos. Med. Inst., Ivanova, USSR. CODEN: 29LJA7
 DT Conference
 LA Russian
 AB In the liver tissue of rabbits with exptl. rheumatic disease the content of NAD and NADH was decreased, and the amt. of NADP and unesterified fatty acids (FA) was increased. In rabbits normal NAD, NADH, NADP, and FA was obsd. after the application of Lofenal and Hisphen, after the application of Imuran the content of FA was increased. In the heart tissue of exptl. animals, FA was increased and returned to normal after Imuran application. NAD and NADH were decreased in the muscle tissue of exptl. rabbits and returned to normal values after immunosuppressors application.
 IT **53-59-8 53-84-9**
 RL: BIOL (Biological study)
 (of liver, in rheumatism, **immunosuppressant** effects on)
 RN 53-59-8 HCAPLUS
 CN Adenosine 5'-(trihydrogen diphosphate), 2'-(dihydrogen phosphate), P'.fwdarw.5'-ester with 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

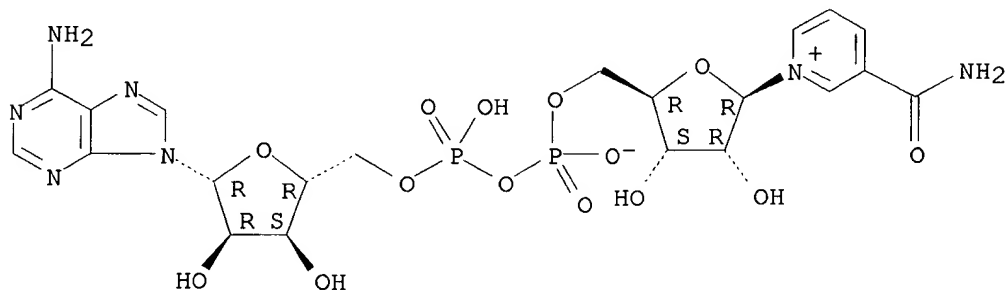


PAGE 1-B

—NH₂

RN 53-84-9 HCAPLUS
 CN Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with
 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium, inner salt (9CI)
 (CA INDEX NAME)

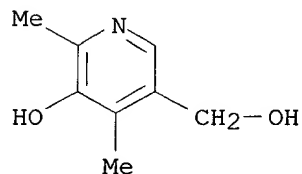
Absolute stereochemistry.



L9 ANSWER 26 OF 29 HCAPLUS COPYRIGHT 2002 ACS
 AN 1974:563493 HCAPLUS
 DN 81:163493
 TI Preclinical toxicological studies of carbidopa and combinations of
 carbidopa and levodopa
 AU Zwickey, R. E.; Peck, H. M.; Bagdon, W. J.; Bokelman, D. L.; Brown, W. R.;
 Hite, M.; Jensen, R. D.; Mattis, P. A.; Mendlowski, B.; et al.
 CS Merck Inst. Ther. Res., West Point, Pa., USA
 SO Toxicol. Appl. Pharmacol. (1974), 29(2), 181-95
 CODEN: TXAPA9
 DT Journal
 LA English
 AB Carbidopa (I) [28860-95-9] given orally at 25-135 mg/kg/day to monkeys for
 1 year had no toxic effect, but I given to dogs resulted in pyridoxine [

65-23-6] deficiency. After administration of combinations of I and levodopa [59-92-7], rats exhibited decreased activity, pytalism, and retardation of wt. gain. Salivary gland acinar hypertrophy was also obsd. Increased activity was noted when the combined drugs were given to monkeys for 1 year. No other phys. signs or ophthalmol., hematol., or pathol. changes were obsd. Since I inhibits extracerebral decarboxylase activity, lower doses of levodopa can be used in combination with I in treatment of Parkinsonism with a **redn. in side effects.**

L9 ANSWER 27 OF 29 HCAPLUS COPYRIGHT 2002 ACS
AN 1973:473799 HCAPLUS
DN 79:73799
TI Role of antivitamins after homoplastic skin transplants
AU Osetrova, S. Ya.
CS USSR
SO K Mekh. Deistviya Vitam. Zhivotn. Rast. Organizmy (1971), 27-9.
Editor(s): Titaev, A. A. Publisher: Izd. Mosk. Univ., Moscow, USSR.
CODEN: 26YFA5
DT Conference
LA Russian
AB In rats with homoplastic skin transplants, given aminopterin [54-62-6] at 5 .mu.g/day or deoxyypyridoxine [61-67-6] at 375 .mu.g/day for 10 days, the lymph node, thymus, and spleen wts. were lower than those in controls. Thus, the antifolate and antivitamin B agents suppressed the body response to homotransplants.
IT **61-67-6**
RL: BIOL (Biological study)
(**immunosuppression** from, skin homotransplant in relation to)
RN 61-67-6 HCAPLUS
CN 3-Pyridinemethanol, 5-hydroxy-4,6-dimethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)



L9 ANSWER 28 OF 29 HCAPLUS COPYRIGHT 2002 ACS
AN 1973:52608 HCAPLUS
DN 78:52608
TI Pharmacological influence on circulation time in xenogenous renal grafts
AU Vahlensieck, W.; Bittscheidt, H.; Brueckner, P.; Bruhns, R.; Jaguljujak, M.; Schuemmer, U.; Sobbe, A.; Wessel, W.
CS Inst. Pathol., Univ. Bonn, Bonn, Ger.
SO Int. Urol. Nephrol. (1972), 4(3), 265-75
CODEN: IURNAE
DT Journal
LA English
AB Gravity perfusion and the intraarterial injection of heparin [9005-49-6] and **immunosuppressive** drugs such as xanthinol nicotinate [**437-74-1**] and azathioprine [446-86-6] into dogs, considerably increased the perfusion time in xenogenous extracorporeal perfusion of pig

kidneys into the circulation of dogs. However, after circulation was blocked serofibrinous and, later, hemorrhagic inflammation occurred in the perfused kidneys, independent of the drugs given and the perfusion times.

L9 ANSWER 29 OF 29 HCAPLUS COPYRIGHT 2002 ACS

AN 1972:135672 HCAPLUS

DN 76:135672

TI Role of histidine decarboxylase inhibitors in the suppression of transplant rejection

AU Moore, Thomas Carleton

CS Dep. Surg., Los Angeles, Calif., USA

SO Pharmacol. Treat. Organ Tissue Transplant., Proc. Int. Symp. (1970), Meeting Date 1969, 60-71. Editor(s): Bertelli, Aldo. Publisher: Excerpta Med., Amsterdam, Neth.

CODEN: 24MBAL

DT Conference

LA English

AB The combination of semicarbazide [57-56-7] and a pyridoxine [65-23-6]-deficient diet together with D-2-hydrazino-3-(4-imidazolyl)propionic acid-HCl (I) [34698-33-4] inhibited histidine decarboxylase [9024-61-7] activity at the transplant site of skin allografts, and prolonged the survival of first-set and second-set skin allografts in rats when used during both first- and second-set grafting. The inhibitors also prolonged the survival of canine renal allografts. The enzymic inhibitors suppressed antibody formation involving both 19 S and 7 S antibodies, by rats and mice following stimulation with Salmonella flagellar antigens. This suppression appeared to be due to lymphoid depletion, and a diminution in the capacity of remaining lymphoid cells to produce antibody.

IT 65-23-6

RL: BIOL (Biological study)

(deficiency of, **immunosuppressant** activity of histidine decarboxylase inhibitors in)

RN 65-23-6 HCAPLUS

CN 3,4-Pyridinedimethanol, 5-hydroxy-6-methyl- (9CI) (CA INDEX NAME)

